Listing of the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

1-400. (Cancelled)

401. (Currently Amended) A method of expanding a population of CD34+ hematopoietic stem cells *ex-vivo*, while at the same time, inhibiting differentiation of the stem cells *ex-vivo*, the method comprising:

(a) culturing said CD34+ hematopoietic stem cells *ex-vivo* under conditions allowing for cell proliferation, said conditions which comprise providing nutrients, serum and a combination of cytokines selected from the group consisting of stem cell factor, thrombopoietin, FLt3 ligand, IL-6 and optionally IL-3 and,

(b) ~~at the same time, culturing said cells under conditions which inhibit differentiation, said conditions which comprise~~ in the same culture medium providing nicotinamide~~, nicotinamide analog, or nicotinamide derivative~~ in an amount ~~effective to inhibit differentiation, wherein said amount effective to inhibit differentiation is~~ between 1.0 mM to 10 mM,

wherein said cells are cultured for a culture period resulting in expanding the population of CD34+ hematopoietic stem cells while inhibiting differentiation of said CD34+ hematopoietic stem cells *ex-vivo* to produce an expanded CD34+ hematopoietic stem cell population with an increased proportion of CD34+/Lin- and CD34+/CD38- cells in the expanded culture~~,~~ as compared to CD34+ cells cultured in the presence of cytokines and nutrients without exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

402-410. (Cancelled)

411. (Currently Amended) An isolated transplantable hematopoietic cell preparation comprising:

an expanded population of CD34+ hematopoietic stem cells propagated *ex-vivo* under conditions allowing for cell proliferation, said conditions which comprise providing a growth medium comprising nutrients, serum and a combination of cytokines selected from the group consisting of stem cell factor, thrombopoietin, FLt3 ligand, IL-6 and optionally IL-3, and under

conditions which inhibit differentiation, said conditions which comprise providing in said culture medium nicotinamide~~, nicotinamide analog, or nicotinamide derivative~~ in an amount ~~effective to inhibit differentiation, wherein said amount effective to inhibit differentiation is~~ between 1.0 mM to 10 mM, wherein said isolated hematopoietic cell preparation is characterized by a greater percentage of $CD34^+/CD38^-$ and $CD34^+/Lin^-$ cells as compared to hematopoietic stem cells propagated in the presence of cytokines and nutrients without exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~; and a pharmaceutically acceptable carrier.

412 - 413. (Cancelled)

414. (Previously Presented) The method of claim 401, wherein said population of stem cells are selected from the group consisting of: embryonic stem cells and adult stem cells.

415. (Cancelled)

416. (Previously Presented) The method of claim 401, wherein said stem cells are derived from a source selected from the group consisting of: bone marrow, peripheral blood and neonatal umbilical cord blood.

417 - 418. (Cancelled)

419. (Currently Amended) The method of claim 401, wherein said expanded hematopoietic cells are further characterized by an absence, or significantly diminished expression of cell surface antigens CD3, CD61, CD19, CD33, CD14, CD15 or CD4.

420 - 421. (Cancelled)

422. (Previously Presented) The method of claim 401, wherein said combination of cytokines further comprise at least one cytokine selected from the group consisting of: interleukin-1, interleukin-2 interleukin-10, interleukin-12 and tumor necrosis factor-α.

423. (Previously Presented) The method of claim 401, which method further comprises providing late acting cytokines.

424. (Original) The method of claim 423, wherein said late acting cytokines are selected from the group consisting of: granulocyte colony stimulating factor, granulocyte/macrophage colony stimulating factor, erythropoietin, FGF, EGF, NGF, VEGF, LIF, Hepatocyte growth factor and macrophage colony stimulating factor.

425 - 436. (Cancelled)

437. (Cancelled).

438. (Cancelled).

439 - 463. (Cancelled)

464. (Currently Amended) The method of claim 401, wherein said culturing said cells in the presence of said exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~ is for a period of up to three weeks.

465. (Currently Amended) The isolated transplantable cell preparation of claim 411, wherein said culturing said cells in the presence of said exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~ is for a period of up to three weeks.

466 - 468. (Cancelled)

469. (Currently Amended) The method of claim 401, wherein said cells are cultured in the presence of 1.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

470. (Currently Amended) The method of claim 401, wherein said cells are cultured in the presence of 5.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

471. (Currently Amended) The method of claim 401, wherein said cells are cultured in the presence of 10.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

472 - 477. (Cancelled)

478. (Currently Amended) The transplantable cell preparation of claim 411, wherein said cells are propagated in the presence of 1.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

479. (Currently Amended) The transplantable cell preparation of claim 411, wherein said cells are propagated in the presence of 5.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

480. (Currently Amended) The transplantable cell preparation of claim 411, wherein said cells are propagated in the presence of 10.0 mM of exogenously added nicotinamide~~, nicotinamide analog or nicotinamide derivative~~.

481. (Cancelled)